

T Level Technical Qualification in Building Services Engineering for Construction

Gas Engineering (8710 – 34) (354)

Candidate Pack

Practical Assignment 2020 – Sample

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Sample

1. Assessment

This assessment is for the Gas Engineering occupational specialism component of the Technical Qualification. This pack consists of a practical assignment that includes a project brief including drawing and diagrams as necessary along with several tasks for you to complete.

Sample

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Sample

2. Candidate Guidance

General guidance

This is a formal assessment that you will be marked and graded on. You will be marked on the quality and accuracy of the work you produce. It is therefore important that you carry your work out to the highest standard you can.

Plagiarism

This is an assessment of your abilities, so the work must be all your own work and carried out under the conditions stated. You will be asked to sign a declaration that you have not had any help with the assignment.

Your tutor is allowed to give you some help understanding the instructions if necessary, but they will record any other guidance you need, and this will be taken into account during marking.

Plagiarism is the failure to acknowledge sources properly and/or the submission of another person's work as if it were your own. Plagiarism is not allowed in this project.

Where research is allowed, your tutor must be able to identify which work you have done yourself, and what you have found from other sources. It is therefore important to make sure you acknowledge sources used and clearly reference any information taken from them.

Timings and planning

You are advised to study the details of the assessment before starting.

You should check with your tutor that you have all the relevant materials, equipment and information/data sources that you need before starting the assessment.

You should take care when planning to make sure you have divided the time available between parts of the assignment tasks appropriately. Timings for tasks are provided within this pack to support with planning and time allocation.

If you have a good reason for needing more time, you will need to explain the reasons to your tutor and agree a new deadline date. Changes to dates will be at the discretion of the tutor, and they may not mark work that is handed in after the agreed deadlines.

If you have a good reason for needing more time, you will need to explain the reasons to your tutor and this must be agreed by City & Guilds.

Health and Safety

You must always work safely, in particular while you are carrying out practical tasks.

You must always follow any relevant Health and Safety regulations, Risk Assessments and codes of practice in line with centre requirements.

If your tutor sees you working in a way that is unsafe for yourself or others, they will highlight the issue and ask you to stop the task immediately. Your tutor will not be able to reassess you until they are sure you are ready for assessment and can work safely.

Presentation of work

Presentation of work must be appropriate to the task.

You should make sure that each piece of evidence including any forms are clearly labelled with your name and the project reference.

All electronic files must be given a clear file name that allows your tutor to identify it as your work.

Written work may be word-processed or hand written unless stated otherwise.

All sketches and drawings should be neat and tidy, to scale and annotated.

Calculations should be set out clearly, with all working shown, as well as any assumptions made. You should use appropriate units at all times, consistent with the requirements of the assignment.

Instructions for this assignment

Ensure you read all the provided assessment information contained in this candidate pack.

You must work independently and not share your work with any other candidates in these supervised assessment sessions.

Your work will be kept secure during any supervised breaks that are taken.

Internet access is **not** allowed.

You must complete all the tasks and present all evidence that is detailed in each task.

This assessment booklet contains:

- An assignment brief
- Task 1
- Task 2
- Task 3

Within each task you will find the following:

Conditions of assessment: This will tell you the duration and rules you must follow when completing a task.

What must be produced for marking: This describes the evidence you must submit when the task is completed. Be aware failure to submit any evidence requested can adversely affect your overall mark for the assessment

Additional evidence for this task: This describes other forms of evidence that will be collected by the assessor to support the marking of your performance. This will often include but not limited to photographic and video evidence.

3. Assignment Brief

You have been called to a domestic property to undertake the planning of a new gas installation with a cooker point and room sealed water heater, as part of a kitchen refurbishment.

As part of this work you will be required to carry out a full survey of the proposed installation, including; planning activities, measurements and calculations.

The installation will be in the kitchen and will comprise of:

- a new free-standing gas cooker with safety shut off valve
- a new room sealed water heater
- new gas pipework from the pre-installed meter, serving all appliances.

The layout of the installation is shown in **Figure 1**.

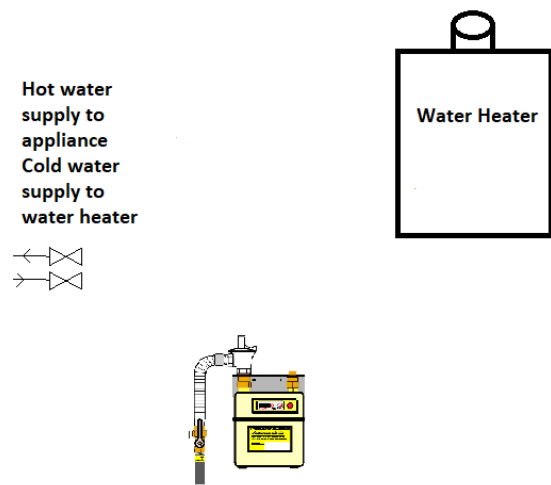
Your supervisor will notify you of the requirements of the installation and you will complete a plan of the proposed space where you will carry out the installation detailing all installation requirements.

Following the pipework installation, the cooker and the water heater must be connected and commissioned as per the manufacturer instructions.

Once your installation has been completed, commissioned and checked to the customer's satisfaction you are required to decommission the installation.

After a period of time the customer calls to notify you that there is a fault with the water heater. You are required to discuss this with the customer, diagnose the fault, produce a written report of the maintenance activity, and carry out the repair work.

Figure 1



This assignment has a time of 24 hours. Plan your time accordingly to enable completion.

4. Tasks

Task 1 - Planning the installation

Your assessor will provide you with a specific working area and a drawing template to ensure the dimensions meet the centre's resources. You must ensure the drawing is applicable to the location you are being assessed in and completed to a commercially acceptable standard.

- a) Plan the installation of the gas cooker and water heater and associated pipework following the client brief
- b) Measure and mark out the work area as detailed in your diagram

Conditions of assessment:

- The time allocated for this task is 7 hours
- You must carry out the task on your own, under controlled conditions

What must be produced for marking:

- Risk assessment
- Method statement with justifications
- Materials list
- Installation diagrams with ventilation requirements, purge volume requirements and pipework sizing calculations

Additional evidence for this task:

- Assessor observation of measurements and marking out of space allocation/ work area

Task 2 - Installation, Commission and Decommission

- a) Install the gas pipework from the primary meter to the water heater and cooker point in accordance with your drawing and as agreed by your assessor.
- b) Connect the electrical supply to the gas cooker from a suitably supplied fused spur connection following the safe isolation procedure
- c) Commission the system and handover to customer
- d) Decommission the system

Conditions of assessment:

- The time allocated for this task is 14 hours

What must be produced for marking:

- Commissioning checklist

Additional evidence for this task:

- Assessor observations:
 - Installation of system
 - Working to tolerances
 - Safe isolation
 - Commissioning
 - Handover to customer
 - Decommissioning

Task 3 – Carry out maintenance

a) Discuss the fault with the customer, investigate the water heater and diagnose the fault

b) Produce a written report detailing the maintenance activity to include:

- Details of the fault
- Method chosen for repair and why
- Detailed process of how you will repair the fault

c) Repair and rectify the fault

Conditions of assessment:

- The time allocated for this task is 3 hours
- You must carry out the task on your own, under controlled conditions

What must be produced for marking:

- A written report to the client explaining why the maintenance repair needs to be carried out and why the method has been chosen

Additional evidence for this task:

- Assessor observations:
 - Discussion with customer
 - Fault diagnosis
 - Rectification of fault

End of Assessment

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